

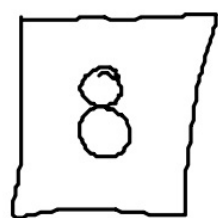
Chapter 0

0.1 Pictures, Graphs, and Diagrams

Ex. A



8/22



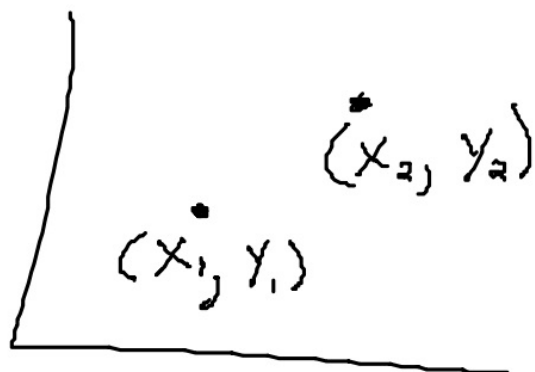
fill with 3 liter 3 times till full

3 - one liter left over

mark where 1 liter is, then dump out rest of water in 3 liter, and dump water from 8 liter till it fills 1 liter mark in 3 liter bucket.

Slope $\frac{\text{rise}}{\text{run}} = \frac{\Delta Y}{\Delta X} = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{y_2 - y_1}{x_2 - x_1} > 0$ +
 $\frac{y_1 - y_2}{x_1 - x_2} < 0$ +
 $\frac{y_1 - y_2}{x_2 - x_1} -$



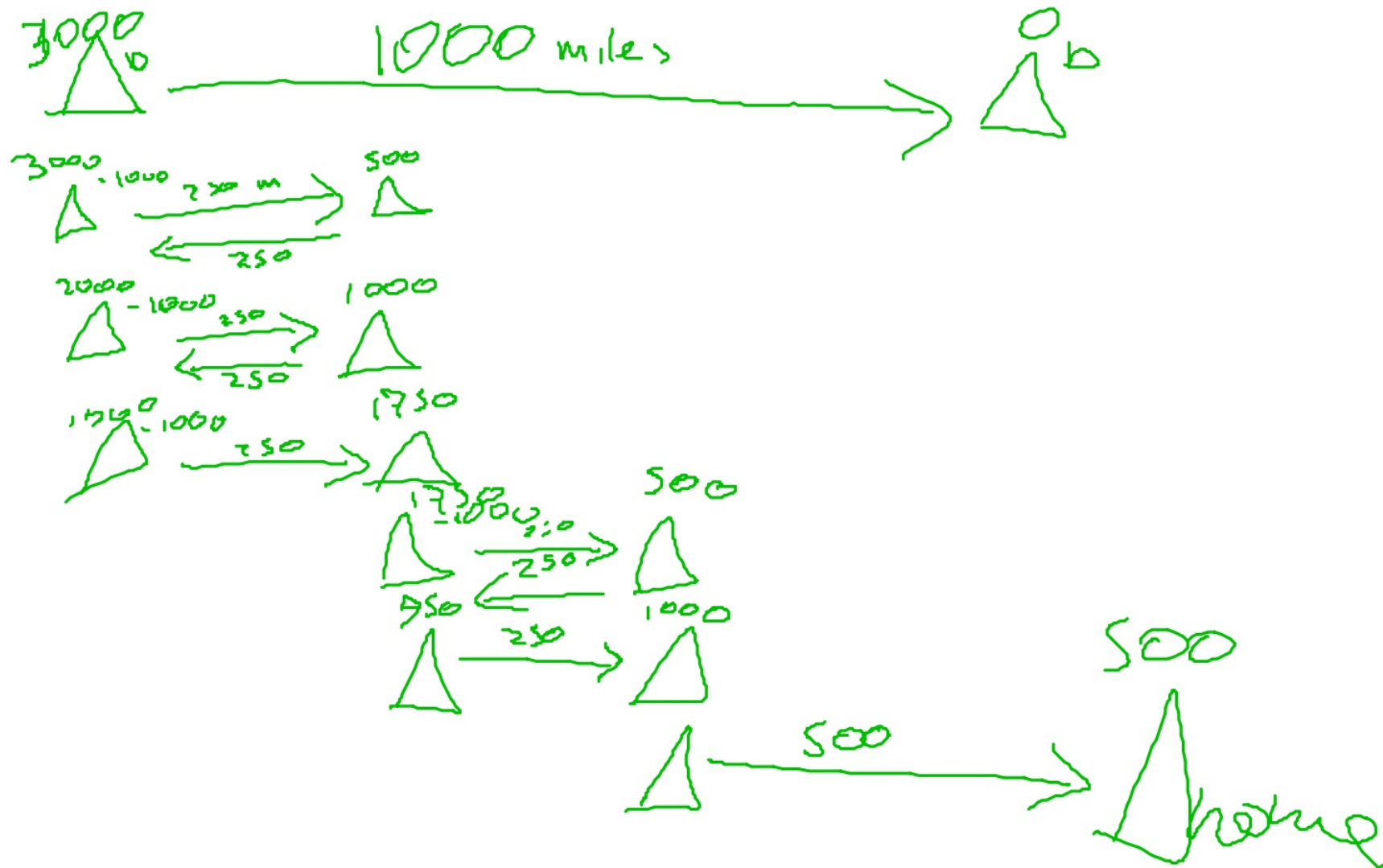
$$\begin{array}{r} (4, 7) \\ +5 +3 \\ \hline (9, 10) \end{array}$$

$$\frac{3}{5}$$

$$\begin{array}{r} 4, 7 \\ -5, -3 \\ \hline (-1, 4) \end{array}$$

A camel crosses a 1000-mile desert with 3000 bananas.

8/23



HW pp. 4-5

1-4, 6

Slope $\frac{\Delta y}{\Delta x}$

$$(4, 7) \\ m = \frac{3}{5}$$

$$\begin{array}{r} +3 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} -3 \\ 2 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \quad 7 \\ -5 \quad 3 \\ \hline (-1, 4) \end{array}$$

$$\begin{array}{r} (x, y) \\ \Delta x \quad \Delta y \\ \Delta x \quad \Delta y \\ +\Delta x + \Delta y \\ \hline (\quad , \quad) \end{array}$$

$$\begin{array}{r} 4, 7 \\ 5, 3 \\ \hline (9, 10) \\ 5, 3 \\ \hline (14, 13) \end{array}$$

www.keymath.com/DAA
fcs20/2daa

$$6d) (3,3)(-5,-2) \quad \frac{-2-3}{-5-3} = \frac{-5}{-8} = \frac{5}{8}$$

$$\begin{array}{ccc} + & + & + \\ - & - & + \end{array} \quad (2,8)(-5,10) \quad \frac{\Delta y}{\Delta x}$$

$$\begin{array}{ccc} + & - & - \\ - & + & - \end{array} \quad \frac{8-10}{2-(-5)} = \frac{-2}{7}$$

$$\frac{10-8}{-5-2} = \frac{2}{-7}$$

0.2 Symbolic Representation

8/24

double = $\times 2$

dozen = 12

over by 3doz

Day 1

Day 2

75doz total in 2 days

$$D1 + D2 = 75$$

$$D2 = 2 \times D1 + 3$$

$$D1 + 2 \times D1 + 3 = 75$$

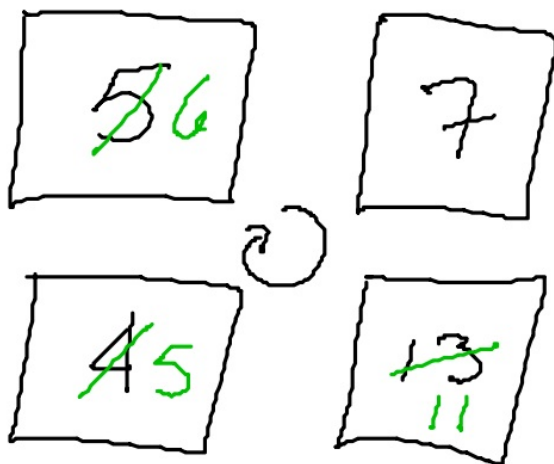
$$D + 2D + 3 = 75$$

$$\begin{array}{r} 3D + 3 = 75 \\ \underline{-3} \quad \underline{-3} \end{array}$$

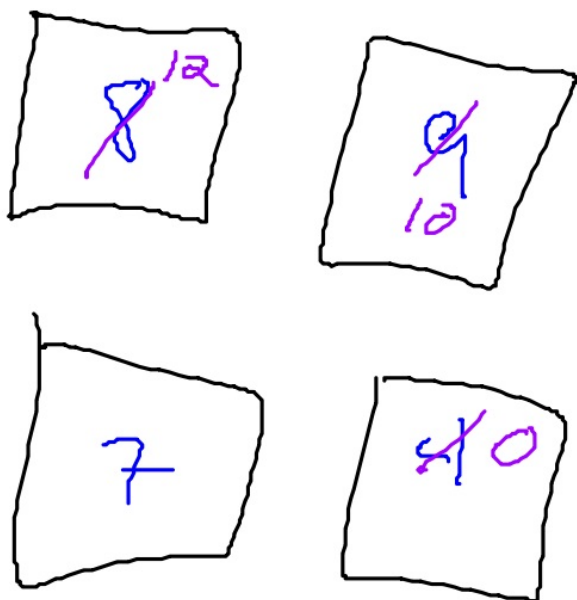
$$\begin{array}{r} 3D = 72 \\ \underline{3} \quad \underline{3} \end{array}$$

$$D = 24$$

Ex A.



29 pigs
closer to 10
as 10 in pens



Ex B. Chen, Juanita, Lou

8/24-25

$$2. \frac{J+L}{2} = 87 \cdot 2 \quad \frac{8}{7}J = L + 6$$

$$J + L = 174$$

p. 11 #1-6

$$L + 6 = C \quad + \quad \frac{8}{7}J - L = 6$$

$$\frac{8J}{7} = \frac{7C}{7}$$

$$\frac{2\frac{1}{7}J}{2\frac{1}{7}} = \frac{180}{2\frac{1}{7}}$$

$$\frac{8}{7}J = C$$

$$J = \frac{180}{\frac{15}{7}} = \frac{36^{12}}{15} \times \frac{7}{15}$$

$$J = 84 \text{ lbs.}$$

$$8(84) = 7C$$

$$C = \frac{8(84)12}{7} = 96 \text{ lbs.} \quad L = 90 \text{ lbs.}$$

Equation 1 represents Anita's purchase of 6 large beads, 20 small beads totaling \$2.70.

Ex A 100 mph avg. speed
 2 laps
 50 mph lap 1
 L speed of lap 2

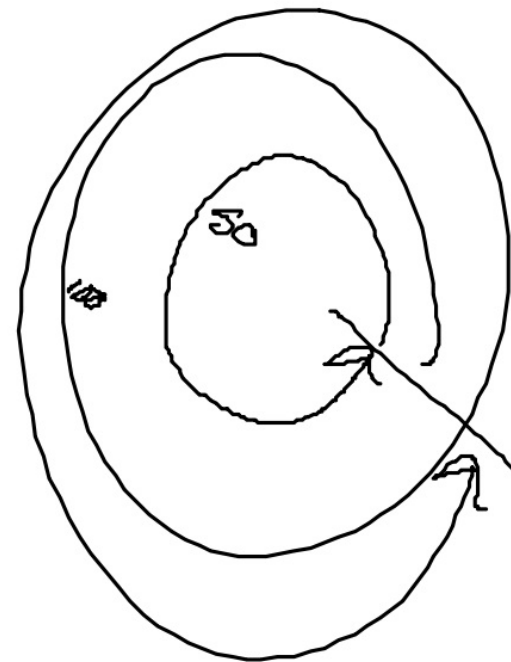
$$\frac{1}{12} \cdot 100 = \frac{100}{12}$$

$$\frac{1}{12} 50 = \frac{50}{12}$$

$$2. \frac{50 + L}{2} = 100 \cdot 2$$

$$\begin{array}{r} 50 + L = 200 \\ -50 \quad -50 \end{array}$$

$$L = 150 \text{ mph}$$



Ex B How many seconds are in a calendar year?

$$\begin{array}{l} 12 \text{ mo} \\ \checkmark 365 \text{ days} \end{array} \quad \begin{array}{l} 1 \text{ yr} \\ \text{yr} \end{array} \times 365 \frac{\text{days}}{\text{yr}} \times 24 \frac{\text{hours}}{\text{day}} \times 60 \frac{\text{min}}{\text{hr}} \times 60 \frac{\text{sec}}{\text{min}}$$

52 weeks

$\checkmark 24 \text{ hours/day}$

$\checkmark 60 \text{ min/hr}$

$\checkmark 60 \text{ sec/min}$

$$365 \times 24 \times 3600 = 31,536,000 \text{ sec}$$

HW pg 16 Ex C

pg 17 Inv (Zebra)



Left	Center	Right
Ca	Fe	S
B	EF	RF
W	L	SP

S S
 Fe = EF
 B/SP SP/B
 Ca Lake Ca Lake

EF \neq well \neq S
 RF \neq Ca

Fe = EF
 Ca = B
 S = RF

SW = dog

Van = gaz.

Zuc = birds

Egg next to Cats

Egg next to Bull.

Beets = Daily

Spt car = Okra

1	2	3	4	5	#
Yellow	Blue	Red	Green	White	Color
compact	Van	SW	SC	SUV	Car
Bull	Gaz	Times	Chron.	Daily	News
Corn	EP	Zuc	okra	Beets	crop
cat	horse	Bird	Zebra	Dog	animal

pp. 18-20

#1-5, 9

pp. 22-25 Any three problems

2 a) $\frac{\text{prob}}{\text{hr}}$ A E

b) $3E + 1A = 139$ Monday's problems done
by Emily + Alejandro.

c) Tuesday $2E + 2A = 130$

d) $\begin{matrix} \text{ii} \\ (37, 28) \end{matrix} \begin{matrix} \text{i} \\ (34, 37) \end{matrix}$

e) $(37, 28)$
 (E, A)

$$3) 2 \times \left(\frac{75 + x}{2} \right) = 100 \times 2$$

$$\begin{array}{r} 75 + x = 200 \\ -75 \quad -75 \\ \hline x = 125 \text{ mph} \end{array}$$

$$4a) \overbrace{7.5(a-3)} = 7.5a - 22.5$$

$$b) 12 + \overbrace{4.7(b+6)} = 12 + 4.7b + 28.2 = 4.7b + 40.2$$

$$c) 5c - 2(c-12) = \underbrace{5c - 2c} + 24 = 3c + 24$$

$$d) 8.4(35-d) + 12.6d = 294 - 8.4d + 12.6d$$

$$294 + 4.2d$$

$$\frac{96t}{15} + \frac{96t}{20} = 96 \quad t \left(\frac{96}{15} + \frac{96}{20} \right) = 96$$

$$,\overline{33} \quad ,\overline{38}$$

$$\frac{1}{3} \quad \frac{1}{6} \quad \frac{1}{7} \quad \frac{1}{9} \quad \frac{1}{11}$$

$$9 + 2.7(b + 3) = 9 + 2.7b + 8.1 = 2.7b + 17.1$$

$$2.7b + 17.1 = 20.7$$

$$\begin{array}{r} -17.1 \quad -17.1 \\ \hline \end{array}$$

$$\frac{2.7b}{2.7} = \frac{3.6}{2.7} = \frac{4}{3}$$

$$\frac{15t}{96} + \frac{20t}{96} = \frac{1}{96}$$

$$t \left(\frac{15}{96} + \frac{20}{96} \right) = \frac{1}{96}$$

$$\frac{96}{35} t \left(\frac{35}{96} \right) = \frac{1}{96} \frac{96}{35}$$

$$t = \frac{1}{35} \text{ min}$$

$$96(15t) + 96(20t) = 96$$

$$t(1440) + t(1920) = 96$$

$$\frac{t(3360)}{3360} = \frac{96}{3360}$$

$$t = 0.03 \text{ min}$$

$$\frac{96t}{15} + \frac{96t}{20} = 96$$

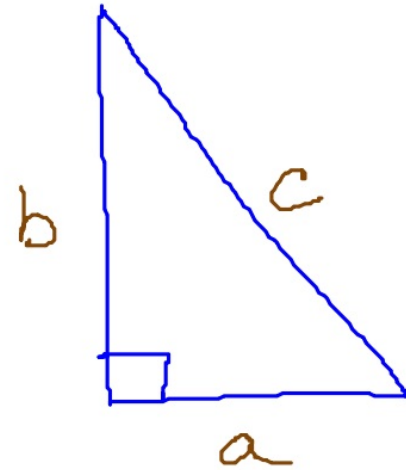
$$t \left(\frac{96}{15} + \frac{96}{20} \right) = 96$$

$$\frac{32}{5}$$

$$t(6.4 + 4.8) = 96$$

$$t(11.2) = \frac{96}{11.2}$$

$$t = 8.6 \text{ min}$$



$$a^2 + b^2 = c^2$$

$$3^2 + 3^2 = c^2 = 9 + 9 = 18$$

$$\sqrt{c^2} = \sqrt{18}$$

$$c = \sqrt{18} = 4.24$$

Is less than $<$
Is more than $>$
Less than $-$
More than $+$

"five times three less than a number"
 $5 \times y - 3$ $5(y - 3)$

$$3 - 4x$$

three less ~~four~~ times a number
Less than

$$4x - 3$$

$$C = 19.95 + 0.35m$$

$$m = 5$$

$$C = 19.95 + 0.35(5)$$